



SEQUENCE LISTING

<110> Birger Sorensen

<120> Method of Producing an HIV-1 Immune Response

<130> 02833.4001LO

<140> US 10/659,324

<141> 2003-09-11

<150> US 09/674,674

<151> 2001-07-25

<160> 49

<170> PatentIn Ver. 3.1

<210> 1

<211> 20

<212> PRT

<213> artificial sequence

<220>

<223> synthetic peptide

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<221> VARIANT

<222> 1

<223> Xaa in position 1 is Lys or Arg

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<223> Xaa in position 2 is Ala, Gly, Ser or Arg

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<223> Xaa in position 9 is Leu or Ile

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<223> Xaa in position 15 is Ala or Ser

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<222> 16

<223> Xaa in position 16 is Cys or Ser

<220>

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<222> 17

<223> Xaa in position 17 is Gln or Leu

<220>

<221> VARIANT

<222> 18

<223> Xaa in position 18 is Gly, Glu or Arg

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<222> 20

<223> Xaa in position 20 is Gly or Arg

<400> 1

Xaa Xaa Xaa Xaa Xaa Xaa Ala Xaa Xaa Gln Thr Pro Trp Xaa Xaa Xaa
1 5 10 15

Xaa Xaa Val Xaa
20

<210> 2

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<220>

<221> DISULFID

<222> 16

<223> disulfide, optional, can form a homodimer with another SEQ ID NO 2 or a heterodimer with SEQ ID NO 5

<400> 2

Lys Ala Leu Gly Pro Gly Ala Thr Leu Gln Thr Pro Trp Thr Ala Cys
1 5 10 15

Gln Gly Val Gly
20

<210> 3

<211> 20

<212> PRT

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<220>

<223> synthetic peptide

<400> 3

Arg Ala Leu Gly Pro Ala Ala Thr Leu Gln Thr Pro Trp Thr Ala Ser
1 5 10 15

Leu Gly Val Gly
20

<210> 4

<211> 25

<212> PRT

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<221> VARIANT

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<223> Xaa in position 1 is Arg, Lys, Asp or missing

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<222> 2

<223> Xaa in position 2 is Trp, Gly, Lys or Arg

<220>

<221> VARIANT

<222> 3

<223> Xaa in position 3 is Ile, Leu, Val or Met

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<222> 4

<223> Xaa in position 4 is Ile, Val or Leu

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<223> Xaa in position 5 is Leu, Met, Val or Pro

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<222> 13

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<220>

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<222> 14

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<221> VARIANT

<222> 15

<223> Xaa in position 15 is Arg or Lys

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<222> 16

<223> Xaa in position 16 is Met or Leu

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<222> 18

<223> Xaa in position 18 is Ser, Cys or Gln

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<222> 20

<223> Xaa in position 20 is Thr, Val, Ile, Ser or Ala

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<222> 21

<223> Xaa in position 21 is Ser, Gly or Thr

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<222> 24

<223> Xaa in position 24 is Asp, Glu, Cys or Gly

<220>

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<222> 25

<223> Xaa in position 25 is Gly or missing

<400> 4

Xaa	Xaa	Xaa	Xaa	Xaa	Gly	Leu	Asn	Pro	Leu	Val	Xaa	Xaa	Xaa	Xaa	Xaa
1				5					10					15	

Tyr	Xaa	Pro	Xaa	Xaa	Ile	Leu	Xaa	Xaa
			20				25	

<210> 5

<211> 24

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<223> synthetic peptide

<220>

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<222> 23

<223> disulfide, optional, can form homodimer with another SEQ ID NO 5 or a heterodimer with SEQ ID NO 2

<400> 5

Trp	Ile	Ile	Pro	Gly	Leu	Asn	Pro	Leu	Val	Gly	Gly	Gly	Lys	Leu	Tyr
1				5					10					15	

Ser	Pro	Thr	Ser	Ile	Leu	Cys	Gly
				20			

<210> 6

<211> 24

<212> PRT

<213> artificial sequence

<220>

<223> synthetic peptide

<400> 6

Arg	Trp	Leu	Leu	Leu	Gly	Leu	Asn	Pro	Leu	Val	Gly	Gly	Gly	Arg	Leu
1				5					10					15	

Tyr	Ser	Pro	Thr	Ser	Ile	Leu	Gly
-----	-----	-----	-----	-----	-----	-----	-----

<210> 7
 <211> 23
 <212> PRT
 <213> artificial sequence

<220>

<223> synthetic peptide

<400> 7
 Lys Ile Leu Leu Gly Leu Asn Pro Leu Val Gly Gly Gly Arg Leu Tyr
 1 5 10 15

Ser Pro Thr Ser Ile Leu Gly
 20

<210> 8
 <211> 23
 <212> PRT
 <213> artificial sequence

<220>

<223> synthetic peptide

<400> 8
 Arg Leu Leu Leu Gly Leu Asn Pro Leu Val Gly Gly Gly Arg Leu Tyr
 1 5 10 15

Ser Pro Thr Thr Ile Leu Gly
 20

<210> 9
 <211> 27
 <212> PRT
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<223> synthetic peptide

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 <223> Xaa in position 2 is Asn, Ala or Lys

<220>

<221> VARIANT
 <222> 3
 <223> Xaa in position 3 is Pro, Gln, Gly, Ile or Leu

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<222> 7

<223> Xaa in position 7 is Val or Ala

<220>

<221> VARIANT

<222> 8

<223> Xaa in position 8 is Gly or Lys

<220>

<221> VARIANT

<222> 9

<223> Xaa in position 9 is Glu, Asp, Lys, Phe or Thr

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<221> VARIANT

<222> 10

<223> Xaa in position 10 is Ile, Met, Val or Leu

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<222> 11

<223> Xaa in position 11 is Tyr, Leu or missing

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<222> 12

<223> Xaa in position 12 is Ser or missing

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<222> 14

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<220>

<221> VARIANT

<222> 15

<223> Xaa in position 15 is Gly or missing

<220>

<221> VARIANT

<222> 16

<223> Xaa in position 16 is Arg or missing

<220>

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<222> 17

<223> Xaa in position 17 is Asp, Arg, Trp, Ala or missing

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<223> Xaa in position 19 is Tyr or missing

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<223> Xaa in position 20 is Lys or Arg

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<223> Xaa in position 21 is Arg, Lys or Asp

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<223> Xaa in position 23 is Ile, Met, Val, Gln or Ala

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<223> Xaa in position 24 is Ile, Val or Ala

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<223> Xaa in position 25 is Leu, Met or Val

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<223> Xaa in position 26 is Gly or Cys

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<223> Xaa in position 27 is Leu or missing

<400> 9

Xaa Xaa Xaa Pro Ile Pro Xaa Xaa Xaa Xaa Xaa Xaa Gly Xaa Xaa Xaa

1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
20 25

<210> 10
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<222> 24
<223> disulfide, optional

<400> 10
Arg Asn Ile Pro Ile Pro Val Gly Asp Ile Tyr Gly Gly Gly Asp Ile
1 5 10 15

Tyr Lys Arg Trp Gln Ala Leu Cys Leu
20 25

<210> 11
<211> 26
<212> PRT
<213> artificial sequence

<220>

<223> synthetic peptide

<400> 11

Arg Ala Ile Pro Ile Pro Ala Gly Thr Leu Leu Ser Gly Gly Gly Arg
1 5 10 15

Ala Ile Tyr Lys Arg Trp Ala Ile Leu Gly
20 25

<210> 12
<211> 23
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<213> artificial sequence

<220>

<223> synthetic peptide

<400> 12
Ala Leu Pro Ile Pro Ala Gly Phe Ile Tyr Gly Gly Gly Arg Ile Tyr
1 5 10 15

Lys Arg Trp Gln Ala Leu Gly
20

<210> 13
<211> 22
<212> PRT
<213> artificial sequence

<220>

<223> synthetic peptide

<400> 13
Lys Ile Pro Ile Pro Val Gly Phe Ile Gly Gly Gly Trp Ile Tyr Lys
1 5 10 15

Arg Trp Ala Ile Leu Gly
20

<210> 14
<211> 24
<212> PRT
<213> artificial sequence

<220>

<223> synthetic peptide

<400> 14
Lys Ile Pro Ile Pro Val Gly Thr Leu Leu Ser Gly Gly Gly Arg Ile
1 5 10 15

Tyr Lys Arg Trp Ala Ile Leu Gly
20

<210> 15
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<223> Xaa in position 2 is Glu, Arg, Phe or Lys

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<222> 5
<223> Xaa in position 5 is Pro or Thr

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<223> Xaa in position 6 is Met, Thr or Nle

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<223> Xaa in position 7 is Phe or Leu

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<223> Xaa in position 20 is Ser, Ala, Leu or missing

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<223> Xaa in position 23 is Ala or Leu

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<220>

<221> VARIANT
<222> 28

<223> Xaa in position 28 is Leu, Ile, Val or Asn

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<221> VARIANT

<222> 29

<223> Xaa in position 29 is Asn, Tyr, Cys or Gly

<220>

<221> VARIANT

<222> 30

<223> Xaa in position 30 is Thr, Met, Ile, Ala, Val or missing

<220>

<221> VARIANT

<222> 31

<223> Xaa in position 31 is Gly or missing

<400> 15

Xaa	Xaa	Ile	Ile	Xaa	Xaa	Xaa	Xaa	Xaa	Leu	Xaa	Gly	Xaa	Xaa	Xaa	Xaa
1				5					10					15	

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
			20						25					30	

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<222> 6

<223> Xaa is Nle

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<221> VARIANT

<222> 21

<223> Xaa is Nle

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<222> 24

<223> disulfide, optional

<400> 16

Lys	Phe	Ile	Ile	Pro	Xaa	Phe	Ser	Ala	Leu	Gly	Gly	Ala	Ile	Ser	Tyr
1				5					10					15	

Asp	Leu	Asn	Thr	Xaa	Leu	Asn	Cys	Ile
				20				25

<210> 17
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<212> PRT
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<223> synthetic peptide

<220>

<221> VARIANT
<222> 6
<223> Xaa is Nle

<220>

<221> DISULFID
<222> 26
<223> disulfide, optional

<400> 17

Lys Phe Ile Ile Pro Xaa Phe Ser Ala Leu Ser Gly Gly Gly Ala Ile
1 5 10 15

Ser Tyr Asp Leu Asn Thr Phe Leu Asn Cys Ile Gly
20 25

<210> 18
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<220>

<223> synthetic peptide

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<222> 6
<223> Xaa is Nle

<400> 18

Arg Phe Ile Ile Pro Xaa Phe Thr Ala Leu Ser Gly Gly Arg Arg Ala
1 5 10 15

Leu Leu Tyr Gly Ala Thr Pro Tyr Ala Ile Gly
20 25

<210> 19
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<212> PRT
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<220>

<223> synthetic peptide

<220>

<221> VARIANT
<222> 5
<223> Xaa is Nle

<400> 19

Lys Ile Ile Pro Xaa Phe Ser Ala Leu Gly Gly Gly Arg Leu Leu Tyr
1 5 10 15

Gly Ala Thr Pro Tyr Ala Ile Gly
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<210> 20
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<223> Xaa is Nle

<400> 20

Arg Ile Ile Pro Xaa Phe Thr Ala Leu Ser Gly Gly Gly Arg Leu Leu
1 5 10 15

Tyr Gly Ala Thr Pro Tyr Ala Ile Gly
20 25

<210> 21

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<221> DISULFID
<222> 23

<223> disulfide, optional

<400> 24

Asn Ile Pro Ile Pro Val Gly Asp Ile Tyr Gly Gly Gly Asp Ile Tyr
1 5 10 15

Lys Arg Tyr Gln Ala Leu Cys Leu
20

<210> 25

<211> 24

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<223> synthetic peptide

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<221> VARIANT

<222> 5

<223> Xaa is Nle

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<221> VARIANT

<222> 20

<223> Xaa is Nle

<220>

<221> DISULFID

<222> 23

<223> disulfide, optional

<400> 25

Trp Ile Ile Pro Xaa Phe Ser Ala Leu Gly Gly Ala Ile Ser Tyr Asp
1 5 10 15

Leu Asn Thr Xaa Leu Asn Cys Ile
20

<210> 26

<211> 20

<212> PRT

<213> Homo sapiens

<400> 26

Lys Ala Leu Gly Pro Gly Ala Thr Leu Glu Glu Met Met Thr Ala Cys
1 5 10 15

Gln Gly Val Gly
20

<210> 27

<211> 20

<212> PRT

<213> Homo sapiens

<400> 27

Arg Arg Met Arg Thr Lys Ala Ser Ile Lys Asp Met Leu Ser Ser Ser
1 5 10 15

Gln Arg Val Arg
20

<210> 28

<211> 20

<212> PRT

<213> Homo sapiens

<400> 28

Lys Gly Leu Gly Val Arg Ala Thr Leu Glu Glu Met Met Val Ala Cys
1 5 10 15

Gln Gly Val Gly
20

<210> 29

<211> 20

<212> PRT

<213> Homo sapiens

<400> 29

Lys Ser Leu Gly Ala Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys
1 5 10 15

Gln Gly Val Gly
20

<210> 30

<211> 20

<212> PRT

<213> Homo sapiens

<400> 30

Lys Ala Leu Gly Ser Glu Ala Thr Leu Glu Glu Met Met Thr Ala Cys
1 5 10 15

Gln Gly Val Gly
20

<210> 31

<211> 20

<212> PRT

<213> Homo sapiens

<400> 31

Lys Ala Leu Gly Gln Gln Ala Thr Leu Glu Glu Met Met Thr Ala Cys
1 5 10 15

Gln Gly Val Gly
20

<210> 32

<211> 29

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<220>

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<220>

<221> DISULFID

<222> 5

<223> disulfide

<220>

<221> VARIANT

<222> 21

<223> Xaa is 2-aminohexanoic acid

<220>

<221> VARIANT

<222> 22

<223> Xaa is 2-aminohexanoic acid

<220>

<221> DISULFID

<222> 25

<223> disulfide

<400> 32

Ala Asn Pro Asp Cys Lys Gln Ile Leu Lys Ser leu Gly Pro Gly Ala
1 5 10 15

Thr Leu Gln Gln Xaa Xaa Thr Ala Cys Gln Gly Val Gly
20 25

<210> 33

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<221> DISULFID

<222> 7

<223> disulfide

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<221> VARIANT

<222> 11

<223> Xaa is 2-aminohexanoic acid

<220>

<221> DISULFID

<222> 14

<223> disulfide

<400> 33
Leu Ile Trp Gly Ala Thr Cys Gln Glu His Xaa Thr Ala Cys Gln Gly
1 5 10 15

Val Gly

<210> 34
<211> 21
<212> PRT
<213> Homo sapiens

<400> 34
Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr Ser Pro
1 5 10 15

Thr Ser Ile Leu Asp
20

<210> 35
<211> 21
<212> PRT
<213> Homo sapiens

<400> 35
Lys Gly Val Val Met Gly Leu Asn Lys Met Val Lys Met Tyr Cys Pro
1 5 10 15

Val Gly Ile Leu Glu
20

<210> 36
<211> 21
<212> PRT
<213> Homo sapiens

<400> 36
Lys Trp Met Ile Val Gly Leu Asn Lys Val Val Arg Met Tyr Gln Pro
1 5 10 15

Ile Ser Ile Leu Gly
20

<210> 37
<211> 21
<212> PRT
<213> Homo sapiens

<400> 37
Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr Ser Pro
1 5 10 15

Ser Ser Ile Leu Asp
20

<210> 38
<211> 21
<212> PRT
<213> Homo sapiens

<400> 38
Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg Met Tyr Ser Pro

1	5	10	15
---	---	----	----

Ala Ser Ile Leu Asp
20

<210> 39
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 39
 Asn Asn Pro Pro Ile Pro Val Gly Glu Ile Tyr Lys Arg Trp Ile Ile
 1 5 10 15

Leu Gly Leu

<210> 40
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 40
 Ser Asn Gln Ala Val Pro Val Lys Asp Met Leu Arg Lys Gly Met Val
 1 5 10 15

Met Gly Leu

<210> 41
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 41
 Gly Asn Gly Ser Asn Pro Val Gly Lys Val Tyr Lys Asp Trp Val Ile
 1 5 10 15

Val Gly Leu

<210> 42
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 42
 His Asn Pro Gly Thr Pro Val Gly Glu Ile Tyr Lys Arg Trp Ile Ile
 1 5 10 15

Leu Gly Leu

<210> 43
 <211> 19
 <212> PRT
 <213> Homo sapiens

<400> 43
 Ala Asn Pro Pro Ile Pro Val Gly Glu Ile Tyr Lys Arg Trp Ile Ile
 1 5 10 15

Leu Gly Leu

<210> 44

<211> 19
<212> PRT
<213> Homo sapiens

<400> 44
Pro Asn Pro Pro Ile Pro Val Gly Glu Ile Tyr Lys Arg Trp Ile Ile
1 5 10 15

Leu Gly Leu

<210> 45
<211> 21
<212> PRT
<213> Homo sapiens

<400> 45
Pro Glu Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala Thr Pro
1 5 10 15

Gln Asp Leu Asn Thr
20

<210> 46
<211> 21
<212> PRT
<213> Homo sapiens

<400> 46
Pro Arg Ile Thr Thr Thr Leu Thr Glu Leu Ala Asp Gly Ala Ile Ser
1 5 10 15

Tyr Asn Ile Tyr Met
20

<210> 47
<211> 21
<212> PRT
<213> Homo sapiens

<400> 47
Pro Glu Leu Asn Pro Met Phe Ala Leu Leu Ser Glu Gly Ala Val Pro
1 5 10 15

His Asp Val Asn Ile
20

<210> 48
<211> 21
<212> PRT
<213> Homo sapiens

<400> 48
Pro Glu Val Ile Pro Met Phe Met Ala Leu Ser Glu Gly Ala Leu Pro
1 5 10 15

Gln Asp Leu Asn Ala
20

<210> 49
<211> 21
<212> PRT

<213> Homo sapiens

<400> 49

Pro	Glu	Val	Ile	Pro	Met	Phe	Ser	Ala	Leu	Ser	Glu	Gly	Ala	Thr	Pro
1				5					10					15	

Gln	Asp	Leu	Asn	Val
			20	